

- (i) selecting an alloy comprising Copper and Zinc in the range of 62-86% of Copper and 10-28% of Zinc along with 6% of Aluminum;
  - (ii) melting alloy composition in an induction furnace operating in air under charcoal cover followed by casting into desired shapes;
  - (iii) homogenizing the above composition at 800<sup>0</sup>C for a period of about two hours followed by cooling;
  - (iv) surface machining for removing oxide scale formation;
  - (v) analyzing the alloy composition
  - (vi) re-heating the shaped material at about 575<sup>0</sup>C for about three minutes;
  - (vii) quenching said material with cold water;
  - (viii) obtaining a fully martensitic structure;
  - (ix) identifying the soft shape memory material with martensitic structure; and
  - (x) recording the temperature and structure of the material.
2. A shape memory alloy as claimed in claim 1, wherein said alloy having a martensitic transformation temperature lowered by about 80<sup>0</sup>C from said alloy's initial martensitic transformation temperature.
3. A shape memory alloy as claimed in claim 1, wherein said alloy displays good shape memory at a re-betatising temperature of about 575<sup>0</sup>C.
4. A shape memory alloy as claimed in claim 1, wherein said alloy having good fatigue properties thereby preventing quench cracking.
5. (Cancelled)
6. A shape memory alloy as claimed in claim 1, wherein said alloy having good shape memory response properties.